

／ MASW (MULTI-CHANNEL ANALYSIS OF SURFACE WAVES)

An Active Source Surface Wave Technique for Measuring Shear Wave Velocity (V_s)

ADVANTAGES

- ／ Non intrusive: no boreholes required, all equipment is deployed on the surface
- ／ Fast: up to 1 km of MASW line can be collected in a day
- ／ Portable and versatile: equipment can be deployed in most areas of open ground
- ／ Insensitive to background noise when compared with other seismic methods such as refraction
- ／ Sensitive to velocity inversions

SPECIFICATIONS

- ／ Twenty-four 4.5 Hz geophones deployed in a line at usually 1 - 3 m spacing
- ／ Depth of investigation equal to approximately half the array length: up to 30 m
- ／ Geophone array can be towed by a vehicle (landstreamer) or moved manually
- ／ Source can be a sledgehammer or a vehicle mounted 40 kg Accelerated Weight Drop (AWD)
- ／ Results can be displayed as 1D soundings, 2D profiles or a 3D model constructed from multiple profiles
- ／ Topographic variation can be accommodated

APPLICATIONS

- ／ Measurement of V_{s30} for Seismic Site Classification
- ／ Inference of engineering parameters: Young's modulus, shear modulus
- ／ Liquefaction Assessment
- ／ Ground Improvement QA
- ／ Drillhole Targeting

